

Gastric lipoma presenting with dyspeptic symptoms

S.Rajendra, Y. Vaseethan

University Surgical Unit, Teaching Hospital, Jaffna, Sri Lanka.

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Introduction

Lipomas occurring in the digestive tract are benign tumours made up of mature adipose tissues. They can exist in any part of digestive tract [1]. Gastric lipomas (GL) do not occur frequently and represent less than 1% of all tumours occurring in stomach. GL constitute of 5% of all gastrointestinal lipomas [1, 2, 3, 4]. GL occur most frequently in the fifth or sixth decade of life[2]. Patients with GL usually have no symptoms and are commonly identified incidentally. However, patients with GL can present with symptoms like abdominal pain, upper gastrointestinal bleeding, dyspepsia and gastric outlet obstruction [1, 2, 3, 5]. The symptoms can be related to the size of GL and the location in stomach [1]. Symptomatic GL and those GL that are difficult to differentiate from malignant tumours need surgical treatment [4, 5].

Case presentation


A 58 year old Sri Lankan Muslim female patient presented with four months history of dyspeptic symptoms associated with on and off vomiting. There was no history of haematemesis, melaena, loss of appetite or loss of weight. She was a diagnosed patient with hypertension and diabetes mellitus on regular follow up. Her BMI was 27.6 Kg/m². The physical examination of abdomen was unremarkable without any evidence of palpable intra-abdominal or epigastric masses. Her haemoglobin level was 9.9 g/dl. An upper gastrointestinal endoscopy (UGIE) revealed a normal oesophagus, cardia & fundus, but there was a large growth with smooth surface extending from the lesser curvature side of antrum towards the pylorus. (Figure 1).

Scope could not be passed beyond the mass into the duodenum. The mass could be easily compressed and the overlying mucosa could be lifted with biopsy forceps. Biopsy of overlying mucosa showed features of reactive gastropathy.

Correspondence: Sittampalam Rajendra

E-mail: dr.s.rajendra@gmail.com

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 <http://orcid.org/0000-0002-3303-603X>

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Figure 1. Endoscopic photograph showing the lipoma at the lesser curvature of the antral region

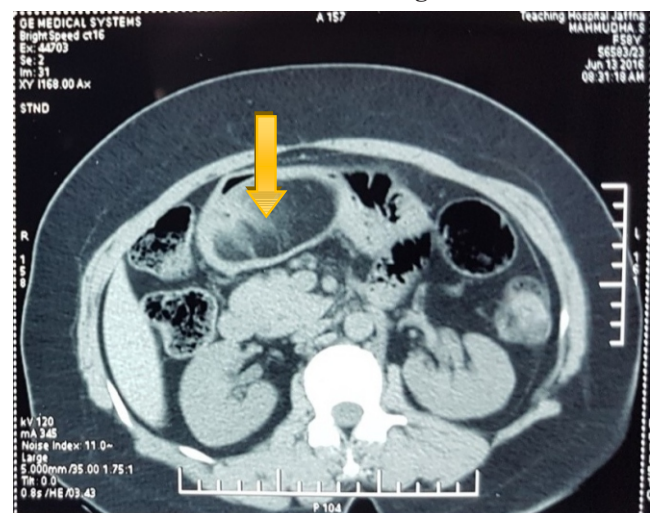


Figure 2: Computed Tomography picture of submucosal gastric lipoma

Computed tomography (CT) revealed an ovoid well circumscribed large submucosal mass in pyloric region favouring a lipoma at pyloric region (Figure 2).

She underwent a midline supra-umbilical laparotomy. Intra operatively a firm mass was palpated in the pyloric region of the stomach. A distal gastrectomy, gastro-jejunostomy and jejunio-jejunostomy were performed on her. An ovoid lump

measuring 8.8 x 5.5 x 4.5 cm with smooth surface was resected with distal stomach. She had an uneventful post operative recovery. The lump had solid and firm yellowish homogenous appearance on cut section. Microscopically of this well circumscribed lump, confirmed a benign sub mucosal gastric lipoma.

Discussion

Colon, ileum and jejunum are the frequent sites of occurrence of GL. They are predominantly asymptomatic [2]. GL are not common. GL are usually well demarcated solitary lesion and three fourth of them occur in the gastric antrum [1, 2, 4]. Almost all (95%) of GL are submucosal but exceptional occurrence of subserosal or intramural lesions have been reported [2, 3, 5]. GL may develop either due to a wrong placement of mesenchymal tissue during embryonic development or as an acquired lesion. The exact aetiology of GL remains unknown [1].

GL usually produce no symptoms, but sometimes patients with GL can present with abdominal pain, dyspepsia, upper gastrointestinal bleeding and gastric outlet obstruction. Iron deficiency anaemia has also been reported as first manifestation of large benign gastric lipoma [6]. Size of GL and location of GL in stomach influence symptoms and signs. GL greater than two cm in size frequently causes abdominal pain [2, 3].

Obstructive symptoms of GL can either be due to block at pylorus or to bulge into the duodenum [3]. When gastric outlet obstruction by GL is associated with chronic upper GI blood loss in old patients, it may be mistaken for a malignant growth [5]. Occasionally it may be difficult to differentiate GL which are benign in nature from a low-grade gastric sarcoma. Although GL have no malignant potential, an association with carcinoma of stomach has been reported in literature [1].

The diagnostic tools for GL are UGIE and imaging [2, 4]. The characteristic signs described in UGIE for GL are tenting sign, cushion sign and naked fat sign. Easy retraction of mucosa over the GL with biopsy forceps is known as tenting sign. A soft cushion like indentation when pressed with forceps over the GL is the cushion sign. Biopsies from the mucosa overlying the GL expose the underlying fatty tissue of GL and is the naked fat sign [2]. Endoscopic biopsy does not usually reveal conclusive results because most GL are situated sub mucosally.

CT is a valuable imaging tool for the diagnosis of GL. A well-circumscribed submucosal mass with uniform fat density is the key feature to detect GL by CT imaging [1, 2, 4, 8]. Endoscopic ultrasonography (EUS) is an efficient alternate diagnostic tool to identify GL. EUS demonstrates gastric walls in layers and the size, shape and location of GL can be delineated clearly. EUS – guided needle biopsy may help

confirm the diagnosis [1, 4]. EUS visualises GL as a slightly hyperechoic homogenous solid mass [1]. Magnetic resonance imaging (MRI) is also helpful in diagnosing GL.

Symptomatic GL and / or GL that are difficult to differentiate from malignant tumours necessitates surgical removal. Small GL are generally asymptomatic and are usually not treated. As far as the surgical removal is concerned circumferential excision with clear margin of normal tissue is the aim of the treatment [6]. However, the choice of the treatment is still controversial. It can be resected surgically or endoscopically. Small submucosal GL < 3cm in diameter can be resected by endoscopic surgery [5]. Use of laparoscopy and endoscopy together will reduce the risk of a missed gastric perforation [4]. GL < 6cm are amenable to laparoscopic resection [4].

The large broad base GL, as in our case, needs surgical resection [5]. A laparotomy and distal gastrectomy performed in our patient has relieved her dyspepsia and gastric outlet obstruction symptoms. Histological diagnosis is essential to rule out malignancy [6]. The histopathology report of our patient confirmed the benign nature of the tumour.

Conclusion

Gastric lipomas are rare benign tumours frequently located submucosally in the antral region. Although majority are asymptomatic they can cause symptoms depending on their size and location in stomach. The diagnosis can be made with UGIE and imaging techniques. Surgical excision is the definitive treatment of choice.

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Learning Points:

- Gastric lipomas (GL) are benign submucosal lesions with no malignant potential.
- Although most of the GL are asymptomatic yet some can produce symptoms based on size and location in the stomach
- Endoscopy and imaging modalities will aid in the diagnosis of GL
- Large and/ or symptomatic GL need surgical resection